EARTHSOURCE SOLUTIONS, INC.

"Tomorrow's Natural Resources Today"

CHESAPEAKE BAY NUTRIENT LAND TRUST LLC COMMENTS ON THE CHESAPEAKE BAY TMDL AND THE VIRGINIA WATERSHED IMPLEMENTATION PLAN

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November 8, 2010

INTRODUCTION

Following many years of experience in the wetland and stream private mitigation banking field, EarthSource Solutions, Inc. created the Chesapeake Bay Nutrient Land Trust, LLC (CBNLT) in 2006 as a private market-based entity with the purpose of generating and transferring nonpoint nutrient offsets ("Offsets") to compensate for nutrient inputs into the Chesapeake Bay and its Virginia tributaries. CBNLT has worked closely with the Virginia Department of Environmental Quality (DEQ) and Virginia Department of Conservation and Recreation (DCR) to develop private facilities that create nonpoint nutrient offsets that can be traded to point sources (under DEQ's program) and developers who cannot meet phosphorous requirements found in Virginia's stormwater permits and regulations (under DCR's program).[1]

CBNLT is thus is a position to provide real world insights and perspective on the impact of the TMDL and Virginia WIP on private market based trading and how private entrepreneurial trading can aid in meeting the water quality needs of the Chesapeake Bay and its tributaries.

It is important to note that the Offsets created under the Virginia program meet the expectations found in Appendix S of the TMDL. Nonpoint nutrient Offsets created by CBNLT provide:

Nutrient Reductions Exceeding "Baseline" Requirements - Offsets represent nutrient reductions in excess of those otherwise required by, or funded under, state or federal law or by tributary strategy plans, and provide an incentive for baseline to be achieved so that Offsets can be created.

Pre-Implemented Benefits - Offsets are state verified on-the-ground nutrient reductions that are in place well in advance of the land disturbing activity that will need the Offset occurring. Large nutrient reductions are created well in advance of their use as Offsets.

Protection of Local Water Quality – Offsets may not be used in contravention of local nutrient water quality requirements. In addition, six percent of each transaction fee goes to DCR or a locality for local water quality enhancement programs. As long as local water quality is protected, Offsets may be used in the same HUC or adjacent HUC just as wetland mitigation credits can be used in Virginia. If no Offset facility is in either HUC, Offsets may be used from the same River Tributary.

[1] These facilities are the first of their kind certified in Virginia by both DEQ and DCR and include the Wildwood Farm in Appomattox County (with annual phosphorous reductions of 101 pounds and 376 pounds of nitrogen) and the Cranston Mill Project in James City County (with annual reductions of 752 pounds of phosphorous and 1,655 pounds of nitrogen).

5735 S. Laburnum Avenue
Richmond, VA 23231
(804) 222.5114 • Fax (804) 222.5220

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Accounting for Attenuation – Offsets are based on the reduction in delivered load to the Bay rather than streamside reductions. This also provides local water quality benefits and eliminates the need for a trading ratio. A trading ratio is also not needed due to the conservative nature of the reduction calculations.

Perpetual Protection - Stormwater Offsets must be protected in perpetuity. Offsets for point sources must be protected for the duration of the point source's need.

Financial Assurance - Offsets are financially assured by the Offset provider until such time as the land conversion has been deemed to be established.

Verified and Enforceable Reductions – Two state agencies must certify the nutrient reductions before they are available for transfer, both agencies have the ability to inspect Offset facilities and require compliance, annual reports of Offset facility compliance is provided, and Offsets are incorporated into permit requirements.

Phosphorous and Nitrogen Benefits – Virginia's stormwater program only regulates phosphorous, but both phosphorous and the associated Offset facility's ratio of nitrogen are retired.

Tracking of Transactions - Similar to the wetland and stream banking systems, Offset facilities provide ledgers documenting transactions and available Offsets.

Private Investment with Public Returns – No state or federal money is needed for Offset creation but their use provides economic benefits to developers, state and local tax bases, and environmental benefits beyond just nutrient reductions.

TMDL and VIRGINIA WIP COMMENTS

TMDL Appendix S

As noted above CBNLT's Offsets meet EPA's expectations for a tradable credit. However, CBNLT's experience in Virginia has shown that there are road blocks to the actual use of the Offsets. One of the more significant road blocks is local government-administered in lieu fee programs, pro rata share and similar programs. Virginia localities thus have the ability to create programs to allow developers to "achieve" stormwater nutrient requirements through payments rather than actual controls. However, the fees are being accumulated and don't always appear to be utilized for nutrient reductions, let alone nutrient reductions that are equivalent to those needed to address the associated impacts. These programs have not qualified under a certification program that meets the needs of the TMDL as offsets have, and also operate in a subsidized environment supported by tax dollars and voluntary payments. The time lag (some localities assert that they have the right to accumulate funds for twelve years before using them) between fee collection and utilization for nutrient reductions means a temporal loss of nutrient reductions as well.

Appendix S should specifically disallow the use of trading mechanisms that do not meet the same high standards imposed upon the private market for the generation and use of credits. Included in this should be a specific statement that Offsets must be certified and represent actual in the ground nutrient reductions at the time of need and that programs that accept funding for some future nutrient reductions may not be used.

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EPA should provide a clear endorsement of DEQ/DCR certified private facilities, such as those developed by CBNLT, and assert that they should be used prior to other, less reliable sources of nutrient reductions.

WIP Expansion of the Nutrient Exchange Program

The Virginia WIP fails to fully acknowledge or take advantage of existing authority for a private market based Offset program. Instead, the Virginia WIP calls for an expansion of the Nutrient Exchange Program without providing details for how that expansion will occur. Based on the limited information in the WIP, it appears that Virginia plans on a system that would rely heavily on excess capacity at sewage treatment plants being traded with multiple other sources. Point source nutrient reductions are not evaluated in the same manner as those resulting from permanent land use alterations and both the science and trading potential appear incompatible. Such a system would be a municipality driven, government subsidized trading system that does not promote land use changes but offers a limited approach using treatment systems reliant on technology to remove the pollutants. Offsets offer a 100% nutrient reduction, whereas a trading program under current water quality and stormwater programs allows a maximum 65% or 75% treatment efficiency for runoff.

The current state of wetland and stream banking in Virginia versus Maryland bears out this argument against a municipality driven trading system. Maryland has a very limited number of private wetland banks yet in Virginia, where governmental establishment and control of wetland and stream mitigation banks for commercial purposes is prohibited, the private market has flourished. CBNLT's experience in the Virginia nutrient market is also demonstrative of the negative impact that local government involvement in trading can have on private markets.

Virginia's WIP suggests that a legislatively authorized study will be pursued to determine the appropriate expansion of the Nutrient Exchange. The study should (i) include as a requirement the protection and promotion of private market based trading systems, (ii) acknowledge that trading between point sources and source such as stormwater that require permanent reductions is limited in potential due to concerns that point sources will not want to permanently give up their allocation.

Cost of implementation

The Virginia WIP anticipates significant federal funding, yet such funding seems unlikely. At the same time the Virginia WIP makes no mention of the cost effectiveness of a private trading program. As noted above, Offsets created by CBNLT are created at no expense to either state or federal agencies. Given these hard economic times, private solutions rather than more governmental subsidies should be vigorously pursed, yet the Virginia WIP fails to do so.

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Missed opportunities for true reductions

The Virginia WIP should include an assessment of current stormwater BMP effectiveness with a special emphasis on whether BMPs have been installed as designed, whether BMPs are being adequately maintained, whether BMPs are actually functioning, and even where the BMP or manufactured devices are actually located. There is an over-reliance on expensive (in real dollars and per pound of reduction) on-site technological solutions with questionable monitoring, maintenance and reliability and with long term replacement needs and costs (meaning replacement may not occur). Many in ground technological systems such as Filterra and Contech systems require regular and long term maintenance and eventual replacement to maintain full nutrient removal capacity. It is questionable whether it is possible to document and ensure that these activities occur as needed. Many question the actual efficiency of these systems and the practicality of long term maintenance. These factors lead to serious questions as to whether expected nutrient reductions are actually occurring. The result is that we could be counting reductions that aren't actually taking place.

The Virginia WIP should provide for increased enforcement with Offsets as a compliance tool

The Virginia WIP should include more emphasis on enforcement of existing requirements. CBNLT is aware of a variety of compliance issues for which Offsets could be part of a compliance package. These examples range from development activities with no water quality consideration in their SWPPP to improperly constructed nutrient management facilities. Offsets are valuable for making up for the temporal loss of nutrients and for longer term solutions to offending site nutrient management deficiencies. Offsets could be made a clear item in the enforcement tool box, particularly with the priority given to stormwater in EPA's National Enforcement Initiatives and its Chesapeake Bay Compliance and Enforcement Strategy.

Local stream impacts

Section 7.2 of the Virginia WIP creates an inappropriate impression that the use of Offsets can have a negative impact on local stream water quality. Virginia state statute (Va Code § 10.1-603.8:1) authorizing nonpoint nutrient Offsets for stormwater permitting already requires an examination of local stream impacts as does guidance developed by DCR. In addition, the Virginia WIP should also note that nutrients at a development site that are accounted for through an Offset rather than an on-site control have very little to no impact on most receiving streams. The true impact to local streams is from water quantity rather than nutrients. Under Virginia's program water quantity must be addressed on-site and, except for some local government programs, cannot be managed off-site.

CONCLUSION

Although environmental credit markets have been around for some time, nutrient Offsets are an innovative and novel approach. Rather than encouraging the use of innovative methods of nutrient reduction,

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there has been a lack of clear endorsement and support of the use of Offsets by state and local governments. This lack of clear support creates a level of unfamiliarity and potential reluctance that permit issuing authorities, landowners and the development community may have toward the use of Offsets.

As the federal government and the Bay jurisdictions strive to achieve the water quality goals for the Chesapeake Bay, the active participation of a private nonpoint nutrient Offset market will be essential. The implemented nutrient reductions and resulting Offsets will provide landowners with additional stewardship and income opportunities while encouraging land use alternatives that will immediately contribute to improved water quality of the Bay and its tributaries.

Neither the Virginia WIP nor the TMDL (Appendix S) address the failure of local programs to provide equivalent nutrient reductions contemporaneously with the land disturbing impact. As noted above, there are a variety of mechanisms by which the Virginia WIP should be significantly improved to promote, rather than hinder, the development of cost effective entrepreneurial solutions.

If you have any questions, please fell free to contact Brent Fults or Scott Reed of CBNLT at (804) 222-5114 or Shannon Varner at Troutman Sanders LLP at (804) 697-1331.

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5735 S. Laburnum Avenue
Richmond, VA 23231
(804) 222.5114 • Fax (804) 222.5220